

Appl. No. 10/605,585
Response dated April 26, 2005
Reply to Office Action of Jan. 26, 2005

AMENDMENTS TO THE DRAWINGS:

The attached sheet of drawings (which includes Figs. 24A-24D) has been amended by adding the term "Prior Art" thereto. This sheet replaces the original sheet including Figs. 24A-24D.

Attachment: Replacement Sheet

Appl. No. 10/605,585
Response dated April 26, 2005
Reply to Office Action of Jan. 26, 2005

REMARKS

In the January 26, 2005 Office Action, claims 1-4 were rejected and claims 5-12 were withdrawn from consideration due to a restriction requirement. In addition, the title of the invention and the drawings were objected to due to minor informalities.

Status of Claims and Amendments

In response to the January 26, 2005 Office Action, the applicants have amended claim 1, cancelled claims 2 and 5-12, and amended the specification and drawings. Reexamination and reconsideration of the pending claims 1, 3-4 are respectfully requested in view of the following comments.

Objection to the Specification

The title of the invention was objected to on the ground that it is not descriptive. In response, the applicants have amended the title of the invention to "Semiconductor device". The applicants respectfully assert that the new title is clearly indicative of the invention to which the claims are directed, and thus have overcome this objection.

Objection to the Drawings

Figures 24A-24D were objected to on the ground that they were not designated by a legend such as --Prior Art--. In response, the applicants have amended the sheet on which Figures 24A-24D appear to include the legend --Prior Art--, and thus respectfully assert that this objection has been overcome.

Claim Rejections - 35 U.S.C. § 102

Claims 1-3 stand rejected under 35 U.S.C. §102(b) as being anticipated by Baxter et al. (US 5,407,854). The applicants respectfully traverse this rejection.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP 2131. Claim 1 was rejected on the ground that the Baxter et al. reference discloses each and every element of Claim 1. However, the applicants respectfully assert that the Baxter et al. reference does not disclose the presence of at least one through hole formed in the thin portion (depicted in Fig. 4), and thus does not anticipate claim 1 under 35 U.S.C. §102(b). The Baxter et al. reference discloses only a via that extends through layers 302 and 303 but not the silicon substrate (depicted in Fig. 3); it does not disclose at least one through hole that extends entirely through a thin portion of a semiconductor substrate main unit. The presence of one or more through holes is an important feature, because through holes not only allow wiring to extend therethrough and over to the main unit on both sides of the recessed portion, but also allow

Appl. No. 10/605,585
Response dated April 26, 2005
Reply to Office Action of Jan. 26, 2005

fluids to flow therethrough when employed in semiconductor devices and micromachines used in conjunction with fluids. Furthermore, the relatively small size of the one or more through holes is an important feature because resistance against wafer flexion will be improved thereby. Thus, because claim 1 is clearly not anticipated by the Baxter et al. reference, the applicants respectfully submit that both independent claim 1 and any claim that depends therefrom are now in condition for allowance.

Claims 1-2 and 4 stand rejected under 35 U.S.C. §102(b) as being anticipated by Finnila (US 5,426,072). The applicants respectfully traverse this rejection.

As noted above, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. MPEP 2131. As can be seen above, claim 1 has been amended so as to clearly distinguish the claimed invention over that which is disclosed in the Finnila reference. More specifically, claim 1 now recites that the semiconductor substrate main unit and the thin portion are comprised of the same semiconductor material. This is clearly different from the semiconductor device disclosed in the Finnila reference. The semiconductor device of the Finnila reference is composed of Silicon-on-Insulator (SOI) wafers, with each SOI wafer including an insulating overglass layer 29 and an SiO₂ layer 11 formed on top of the overglass layer 29 (see Fig. 6). Thus, it is clear that the semiconductor device of the Finnila reference does not anticipate the semiconductor of claim 1, because (1) the overglass layer 29 and the SiO₂ layer 11 of the Finnila reference are not comprised of the same material, and (2) the overglass layer 29 is an insulation material and not a semiconductor material. Thus, because claim 1 is clearly not anticipated by the Finnila reference, the applicants respectfully submit that both independent claim 1 and any claim that depends therefrom are now in condition for allowance.

Claim Rejection - 35 U.S.C. § 102/103

Claim 4 stands rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Baxter et al. The applicants respectfully traverse this rejection, on the ground that claim 4 is allowable in its current form because it is dependent upon claim 1, which as noted above, the applicants respectfully submit is now allowable over the cited prior art.

Appl. No. 10/605,585
Response dated April 26, 2005
Reply to Office Action of Jan. 26, 2005

In view of the foregoing amendments and comments, the applicants respectfully assert that the pending claims are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested. The Commissioner is hereby authorized to charge any fees associated with this communication (including extension of time fees) or credit any overpayment to Deposit Account No. 19-2042.

Respectfully submitted,



Steven Roberts
Reg. No. 39,346

Shinjyu Global IP
c/o GLOBAL IP COUNSELORS, LLP
1233 Twentieth Street, NW, Suite 700
Washington, DC 20036
Phone No. (202) 293-0444
Dated: April 26, 2005